THE GENESEE FARMER.

VOL. VII. ROCHESTER, N. Y. OCTOBER 28, 1837. NO. 43.

PUBLISHED BY LUTHER TUCKER.

TERMS.—The Farmer is published every Saturday, making an annual volume of 416 pages, to which is added a Title-page and Index, at the low price of $2,50, or $2,00 if payment is made at the time of subscribing.

☞ All subscribers must commence with the volume, Jan. 1, or with the half volume, July 1. No subscription taken for less than six months.

☞ THE MONTHLY GENESEE FARMER is made up of selections from this paper, and published on the first of each month, forming, with Title-page and Index, an annual volume of 200 pages, at the low price of FIFTY CENTS a year, *payable always in advance.*

GENESEE FARMER.

SATURDAY, OCTOBER 28, 1837.

The Farmer, its Readers and Correspondents.

The principal labors of the agricultural year are now closed,—the abundant produce of the fields is gathered into the garner,—and the joyful harvest home has been heard from thousands whose hearts we trust have overflowed with gratitude to Him who openeth his hand and the earth is filled with his goodness. With this annual partial suspension of the labors of the husbandman, comes his season of reflection and repose; the time to look about him and decide on the advantages or disadvantages of the course he is pursuing in the cultivation of the soil; to form and mature his plans for the future; to correct his errors, and gain information from the experience of others, and in return communicate to them and to the public any knowledge he may possess which shall be beneficial to the agricultural community.

It is on this latter subject that we now sit down to have a little social converse with the numerous readers and patrons of the Genesee Farmer; those who are practical cultivators of the soil, as well as those professional and scientific men, who delight in the study and the success of agriculture, justly considering it as one of the most useful and honorable occupations that employ mankind. It would be a useless affectation of modesty in us not to believe, and say, that the Genesee Farmer has materially aided during the period of its publication in advancing the interests of the farmer, and diffusing the information which the improving state of the science of agriculture renders so necessary to the owner and tiller of the soil. It is undoubtedly very true that no farmer manages in every respect as well as he knows how; but the fault may not appear of such magnitude, and of course he may not make the effort at correction, which he would do if placed in comparison with what is actually done by others. To furnish the means of correction and comparison; to give the earliest intelligence of improvements in all matters of interest to the farmer; to notice the introduction of all new articles of culture and the best methods of treating them; in short, to impart to our readers whatever might subserve the great cause of agriculture, has been our aim; and if our readers and thealmost unanimous approval of the public press can be considered as proof of the success of our intentions, then have we not labored in vain.

For the encouraging tentimonials of approbation that we receive from the public, we trust we are grateful; but we should be unjust, and ungenerous, not to say that much of the beneficial influence the Farmer has been enabled to exert, has been owing to the great number of valuable contributions on almost every subject connected with agriculture which have been furnished for its columns, by scientific or practical farmers. It is on such contributors we must still rely for the means of doing good; on the men who are willing to devote an occasional hour to the imparting instruction, and enlightening the minds of their fellow-farmers, by communicating for publication the results of their reflection or experience.

While the labors of the season are progressing with the greatest activity, the time of our farmers is too much engrossed by the toils of the field to allow much leisure for writing; but now when the pressure of labor is past, and time may be had for such purposes, we earnestly invite all, those to whom we are under such obligations for former favors of this nature, and those among the multitude of our new subscribers who must be qualified to impart instruction, to resume, or take up their pens, and communicate to us such matters as they may deem most interesting and valuable. There is not a subject in the whole compass of agriculture, on which we should not be happy to receive communications; as there are none, we are confident, on which new light may not be thrown, by a free interchange, and expression, of the experience and opinions of farmers. We particularly solicit contributions from the practical man, the common farmer, and we know there are very few of this class who, if they would make the attempt, might not give us articles of the most valuable kind. For the sake of aiding our friends in the choice of subjects, we will name a few out of the multitude which will 'naturally suggest themselves to any one who reflects on the extent and variety of the objects connected with agriculture.

MANURES.—This subject is one of the first importance to the farmer, and is as yet but very imperfectly understood among us. What has been your mode of preparing it? Have you used it long or rotted? What effect has it produced? What kinds have you tried, and which do you prefer? Lime, plaster, bones, poudrette, marl, stable 'manures—what is your estimate of their comparative value so far as you have used them, and on what description of soils and crops have you found them severally the most effective and valuable.

WHEAT.—What is the kind of soil on which you have cultivated it most successfully? What is the average yield per acre? Is the average less now than formerly, or is it greater? and if either, to what cause is the difference to be attributed? What is your method of cultivation? and if you have adopted a rotation of crops, in what part of the course is the wheat crop placed? If you manure for wheat, how do you apply it, and what manure do you prefer? What variety of wheat do you cultivate, and have you found any difference among the kinds in the liability to smut, blast, or be effected by insects? What insects have you found to injure your wheat, and at what stage of its growth? Have you cultivated spring wheat? and if you have tried various kinds, whieh do you prefer?

THE GRASSES.—The cultivation of the grasses is one of the most important objects that can be brought to the notice of the farmer; yet it is one upon which little has been said, comparatively, and which is but little understood. Have you made any experiments upon their respective value for hay or for pasture? Do you prefer sowing each variety of grass seed by itself, or mixed? if the latter, what kinds do you sow together? Have you tried the Sanfoin, Lucern, and Gama grasses, and with what success? What is your method of curing hay; and at what stage of its growth will grass make the best hay? What is the average weight of hay per acre on your farm and the vicinity? How does plaster and other manures affect your grass, and what is the best mode of manuring our farms permanently in grass?

CORN, BARLEY AND OATS.—Any information on the culture of these valuable crops will be acceptable. What is the general time of planting with you; and how do you prepare your ground for the reception of the seed? Do you guard your seed against depredation by scalding and tarring, or do you prefer planting from the ear? What insect attacks corn, and how may they be prevented? Which of the varieties in use do you prefer for seed, and what are the reasons for such preference? But two kinds of barley are cultivated to any extent among us; the two, and the six rowed. Different opinions are entertained of their respective value and productiveness, which our farmers by a history of their experience in raising this grain can decide. It is necessary and right that it should be done. Will you assist in doing it? Oats are the most extensively grown of any of the small grain, and are usually the most productive. There are several varieties in cultivation, such as the common oat, the Tartarian, the Siberian, potatoe, and horse mane oat, and it would be well to have their conflicting claims to our preference decided. What is your experience in raising oats? What variety do you prefer, and for what reasons? Which is the most profitable crop, spring wheat, barley or oats. Is there any difference in their exhausting the soil, and if so, which has the most injurious effect?—Have you discovered in these grains an inclination to smut, and have you succeeded in preventing it?

THE ROOTS.—The introduction of the culture of roots, such as the turneps, mangel wurtzel, carrots, &c. into England, by rendering the soil more productive, increasing the number of cattle and sheep, and doubling the quantity of grain produced, has at least added one-third to the means of subsistence in that country, within a very few years; and we may reasonably expect corresponding benefits from the extension of their culture in this. Potatoes have long been considered an indispensable article of consumption among us; and the culture is better understood here than that of the first mentioned; still there is abundant room for improvement, both in the quantity and quality of these roots.—What is your method of cultivating the above roots? What do you find to be the average yield per acre; what kind of soil the most suitable for them; what their value for feeding animals; and have you ascertained by experiment which of the kinds should be preferred by the farmer.

HORSES, CATTLE, SHEEP, AND SWINE.—These form much of the wealth of agriculturists; and any remarks respecting raising, feeding, or fattening any of these will be considered valuable. We want information respecting the best breeds, and surest method of improving them, whether by importation, or by crossing. The comparative value of each to the farmer should also be made a subject of investigation; and the history of their diseases,

with the best remedies for them should not be forgotten. So large a part of our country is adapted to the dairy business, or the making of butter and cheese, and these constitute such an item in our prosperity, as well as comfort, that we particularly invite contributions on any subject relating to this branch of domestic economy.

Depredators.—Under this head may be included all those beasts, birds, and insects, that prey on the productions of man's care and labor, and materially lessen his profits if not totally destroy them. Of these depredators, insects, such as the Hessian fly, the wheat worm, the wire worm, the grub, the various families of the plant louse, the tribes of caterpillars, in their several ways are the most destructive, and most deserve the investigation of the farmer and the man of science. Any thing that shall teach us how to prevent or destroy any of these depredators cannot be otherwise than acceptable to the readers of the Farmer.

We have but barely touched on the multitude of subjects that will suggest themselves to the observing farmer, as topics of research and investigation. Fruits, buildings, farming implements, and articles of domestic economy, are all worthy of a place in our columns,—in short, any thing that can conduce to the prosperity, ease, lessening of severe labor, accumulation of intelligence, and moral respectability of its professors, and the establishment of agriculture on a more elevated basis than has heretofore been accorded to it, shall be most cordially welcomed by us.

It is not expected that any one individual can be able to treat all the various objects connected with agriculture, or which are hinted at above, successfully; but there are few, if any, of our practical or scientific readers, who are not able to communicate much information on some one or more of these topics, or others that we have been compelled to omit, which would be of great utility to our farmers, and impart additional value and usefulness to our columns. We know farmers feel a reluctance to lay down the plough for the pen, but when the season prohibits the former, considerations of public good, should induce them to occasionally use the latter, in communicating the results of their reflection and experience in the pursuit of agriculture. We respectfully request our former correspondents, and our new subscribers, to think of these things.

Brief Hints for November.

As the farmer's work is now generally completed, implements should be cleaned, dried, and laid aside. Every farmer should have a building for his carts, ploughs, harrows, hoes, rakes, &c. There should be a place for every thing and every thing in its place, in order to prevent looking half a day at a time for lost tools. Tools will last much longer if painted, and now is a good time to do the work.

Wherever practicable, plough the ground for spring crops. Look ahead for next spring, or you will get in your seed too late.

Employ leisure time in repairing fences, to prevent hurry next season.

Preserve all your refuse apples for feeding hogs and cattle during winter. They are worth more than potatoes, as has been proved by experiment and weighing.

To salt pork properly, it is essential only to imbed the pieces completely in salt. Place a layer of salt on the bottom, then a layer of pork in the usual manner, filling the interstices, and so on till the barrel is filled. Use plenty of salt, it will not be lost. Saltpetre, when used, should be in very small quantities, say a 400th part. Some add a small quantity of sugar.

To cure hams, mix a bushel of good salt with a pound of nitre, rub the hams well with the mixture, and put them down. Rub them again in a few days that they may absorb the salt more evenly. In about four weeks, (sooner, if the pieces are small) wash them and hang them up in the smoke house. The following mixture has been recommended as good for hams. One pound salt, one ounce nitre, pulverized and mixed, added to two quarts of molasses; the pieces are to be thoroughly rubbed with this and laid flesh side up, and suffered to remain three weeks.

In the Garden, a few vegetables remain to be gathered; cabbages should be taken up on a warm dry day, drained in an inverted position of such water as they contain, and properly protected from water and too great dryness, and from frost. They may be thus protected in various ways. One is to place them in a cellar, with the roots buried in a box of earth. Another is to place them in a row in a dry part of the garden, in an upright position, the *roots* and *stems* buried, and then covering them with two broad boards or slabs in the form of a roof, and burying these with earth. Another is to separate the loose leaves, and bury them in a conical pile, precisely as turneps and potatoes are treated. When put in the cellar, they should be dry and clean, otherwise in warm weather they will cause unwholsome air.

Near the commencement of winter, lay down tender exotic grape vines, first placing a few stones on them to keep them down, until two or three inches of earth is thrown on the vines, when the stones are removed and the vacancies supplied with earth.

All tender shrubs need protection before winter. Flexible stems may be laid down; stiff upright ones may be protected by incasing them well with the branches of evergreens. All transplanted bulbous roots will also need protection.

Asparagus beds, when the tops are dead, should be cleared off, and a layer of dung one or two inches thick spread evenly over.

Seeds of parsneps, carrots, onions, &c. may be sown in autumn to advantage if done so late that they will not vegteate before cold weather. Early peas may be sown to great advantage, if there is no danger from mice. A writer on gardening says: "To cultivate parsneps, sow the seed in autumn soon after they are ripe, by which means the seed will come up early the following spring, and let the plants get strong before the weeds will grow to injure them."

All vacant ground should be ploughed or spaded, to be subjected to the action of winter frosts, and to be in readiness as early as possible in spring.

Cattle Show and Fair of the Berkshire Agricultural Society.

We take pleasure in bringing the proeeedings of this Agricultural Society before our readers. One of the oldest in the country, it goes on from strength to strength; enlarging its sphere of usefulness, and exciting new interest in its supporters, and the friends of agriculture. We do not believe the most inveterate opposer of agricultural societies could have been present at the late meeting of the Berkshire society without feeling that he had erred in his estimate of their usefulness, and finding his prejudices gradually melting away before the evidences of their benefit furnished by the proceedings.

The meeting of the cattle show and fair, took place on Wednesday and Thursday, the 4th and 5th of October, being the 27th anniversary. The exhibition of animals, domestic manufactures, agricultural implements, and machinery, took place on the first day. The reports of the several committees, and the ploughing match, were attended to on the second. The services in the church were conducted by the Rev. President of Williams College; the address to the society was by Judge Buel of Alhany; and after that was closed, the venerable Elkanah Watson, now upwards of eighty, one of the founders of the society, as from the first he has been one of its firmest friends and advocates, came forward by request, and favored the audience with a few remarks full of patriotism and sound feeling, which were listened to with the greatest interest. At no former anniversary has the attendance of citizens and members been so great, or the satisfaction so general. On the second day after the society had dined, an address was made by the Rev. Henry Colman, the gentleman appointed to make the agricultural survey of the state, and his exhibition of the objects of the survey and the intended manner of accomplishing it, showed a full acquaintance with the subject, and we doubt not will perform all that can reasonably be expected from such a praiseworthy undertaking. The excellent address of Judge Buel is to be published, and will add to his reputation as a practical farmer.

We must be permitted to give a few extracts from the several reports, as evincing the spirit with which the farmers of Berkshire conduct their affairs, and the success which has attended their efforts to improve their agriculture, and introduce the best animals, and implements upon their farms. The committee on agriculture in their report among other things, says:—

"That although the past season has been cold and wet, and the summer months are gone without shedding their usual warm influences, yet it has been a fruitful season. One hundred and eight crops were offered for premiums; a fact which proves the goodness of the crops, and the honorable ambition and competition of our farmers. The corn crop though more abundant than last year is still short."

The committee recommends the culture of peas while the present unfavorable seasons for corn continue; and state that the culture of root crops has much extended. The cultivation of wheat, notwithstanding the continued attacks of the worm has been greatly increased. Twenty three crops were entered for premiums. The committee say:—

"The grain worm and other evils will occasionally assail the wheat crop as well as other crops.—Why should the farmer cower before these occasional evils, where 'nothing but uncertainty is certain.' The smut which formerly damaged the wheat has vanished before the intelligence of the farmer. The persevering ingenuity, and patient research of the farmer will overcome or mitigate the existing difficulties. The watchword of the Berkshire farmer should be, Don't give up the wheat crop."

The committee on Manufactures report:—

That they have been greatly pleased with the skill and good taste manifested in the articles submitted for examination and premiums. The richness and beauty of many of the articles of household manufacture, the excellence of the material, and the strength and firmness of the texture, speak well for the industry and improvement of the daughters of Berkshire."

Needle work, the products of the loom, carpetings and woollen cloths were presented in great

quantities and of such excellence that the committee found some difficulty in making the awards.

"In the linen fabrics there has, however, been a sensible dimunition, unwarranted either by the product of the soil or the industry of the housewife. The committee deem this a matter of regret, inasmuch as they believe that the prosperity of the country as well as the thrift of the farmer, depend in no small degree upon the cultivation and manufacture of native flax; and that now, as in the days of the wise King of Israel—'The good wife seeketh wool and flax and worketh diligently with her hands'."

The ploughing match went off with great spirit, and was one of the most attractive parts of the exhibition; the field being literally surrounded with gratified spectators. The ground was laid out in plots of a quarter of an acre each, and the time limited for ploughing, was fifty minutes. Eight horse and seven ox teams, started for the prize. All the horse teams performed their work within the time allotted—one in forty and a half minutes;—and two of the ox teams were also within the time. The committee recommends that at future exhibitions the time be extended to 55 or 60 minutes; because work so quickly done is not always well done, or the example a proper one for the imitation of others.

In the report on Animals, the committee say:—

"That the number of working oxen was unusually large, and it was not without difficulty the premiums were awarded. The four year old oxen, and three year old steers exhibited, were in the opinion of the committee, superior to those exhibited in any previous year."

The reports on the second division of animals, consisting of cows and young cattle, were equally satisfactory; as was also that on the third division embracing sheep and swine. The very great improvement in swine was attributed to the laudable exertions of Mr. Bement in introducing to the notice of the public the superior Berkshire breed of pigs, and a special premium was awarded that gentleman by the society.

The county of Berkshire has for some years been justly celebrated for its sheep and wool, and the present exhibition proved there had been no falling off in these respects. A great number of fine sheep, Saxon, Merino, and Bakewell, were offered for premiums; and Mr. Bement of Albany exhibited for the inspection of the society and others, some beautiful Berkshire pigs, superior South Down, Hampshire Down, and improved Bakewell sheep. The show of improved agricultural implements was good; and the products of the dairy offered for premiums of the first quality.

Such days are in truth, the farmers' holydays. They serve to awaken and strengthen a common interest in the pursuits of agriculture. They make him feel his real importance in the scale of society. and show in strong contrasted light the immense difference between a producer and a consumer; between the man who by labor adds to the substantial wealth of the nation, and he who lives on the industry of others. We do not wonder that with such a stimulus to exertion as exists in honorable competition, agriculture should advance in Old Berkshire; we only regret that the beneficial effects resulting from such a system, wherever it has been tried, cannot be experienced in these rich and fertile districts of the Empire State.

Lime versus the Wheat Worm.

Great hopes were entertained some two or three years since that the sowing lime on wheat would be a preventive of the ravages of the wheat worm that has proved so destructive in the eastern part of this state and New England. These expectations were not sustained by the result, whether from any defect in the mode of application, or other causes, we know not; but good farmers in the counties of Saratoga, Washington, Albany and others, where the worm prevailed, have assured us, that so far as that insect was concerned, they had not been able to perceive or hear of the least benefit being derived from sowing lime on the wheat. We of course inferred that lime was not a preventive, and thought it unwise to consider it as such, or place much reliance upon it for that purpose. Personally we have had no experience in the application of lime, as fortunately its appearance in this section of the country has been rare, and no precautions have been necessary to guard against the attacks of the worm. From what we can learn however, this insect is extending its operations, as some farmers have assured us that in threshing their grain, they for the first time find the worm in considerable quantities, and there can be no doubt that in a few years, our wheat growers will feel the same interest in discovering some preventive, that is now shown at the east.

Though our New York farmers have as yet found little reason for faith in the preventive qualities of lime, we are pleased to learn from the Maine farming journals, that numerous instances of decided benefit from its use when applied for the purpose of destroying the worm, have occurred in that state, where the great quantity of wheat grown the present season in consequence of the legislative bounty, directed the attention of farmers to the necessity of preserving the crop from its ravages. Apprehensive of an attack, it appears the Maine farmers carefully watched for the earliest appearance of the fly, and immediately applied the lime liberally to the ears by sowing when wet with dew or rain. There is a possibility that the farmers of our eastern counties, in applying their lime, delayed too long to produce any effect in deterring the fly from its operations, and experience would seem to indicate that after the egg is once deposited, nothing that has yet been applied will disturb or destroy them. Experiments should be multiplied on this subject, and we hope the farmers of New England who have tried the effects of lime will communicate the results fully to the public, be they for or against the practice. We may here remark in a word, that the practice of terming the worm that is so destructive to our wheat when in the ear, a *weevil*, is incorrect, and liable to produce error in instituting inquiries and conducting experiments. The weevil is the larvæ of a *bug*; the worm, is produced by a *fly*. This distinction is decisive, and should not be overlooked.

Tea Wheat.

Our correspondent in Onondaga informs us that this kind of spring wheat has been introduced into that county the past year, and promises to become a valuable acquisition to those districts in which spring wheat is sometimes cultivated in preference to winter grain. Mr. C. Parsons of Skaneateles, cut thirty-eight shock of heavy sheaves from an acre, and Mr. E. Slocum of Otisco, has threshed forty bushels of fine wheat from forty-six quarts sowing. The straw is a bright yellow, the spike beardless, the chaff white, and the berry pale red. The specimens noticed by our correspondent were rather inferior in plumpness to some parcels of Italian, but were a fine bright wheat, and will no doubt produce good flour. It should be remembered, however, that none of the red wheats,—and all the varieties of spring wheat, with, we believe, but a single exception are of this class,—never afford as white flour, or that of as fine a quality, as the white wheats which constitute the most approved winter grains. The flavor of the bread produced from it is preferred by many, and its weight, sometimes rising as high as sixty-four to the bushel, proves its value to the producer. Let our farmers test the different varieties offered to them, and hold fast to the good;—this is the only way to avoid loss, and ensure success.

Spots on the Sun.

We have noticed in the public journals, several articles from English newspapers, giving extracts relating to the number and magnitude of the spots which have the past season been visible on the sun's disc. These statements are in the main correct, as from five to twelve have been generally visible with a glass, and twice during the summer have we distinctly observed the large spots with the naked eye. For a telescope or spy-glass without a colored object glass, the best time to notice them, is when the air is very transparent, and the sun from five to fifteen minutes above the horizon, as then the rays are so divested of their brilliancy, as to enable the eye to be steadily fixed on the sun, without danger of injury, which at other times of the day is not the case. Nothing can be more variable and changing, than these non-luminous points, whatever they may be. They are rarely found for two successive days the same in appearance or number, though their general position can be easily recognized, and their daily advance proves most conclusively the rotary motion of that luminary. Sometimes the spots appear like a number of well defined dots; sometimes a number of them will be found closed up together into an irregular groupe; sometimes in twenty-four hours, or the interval between one observation and another, a large spot will separate into half a dozen; and at other times they appear like broad thin dusky clouds. When we consider the diameter of the sun, and its distance from us; the number and magnitude of these spots, some of which occupy a space on its surface many times greater than our earth, and compare them with the extent and rapidity of the changes thus constantly going on among them, they furnish a curious, and not altogether uninteresting matter of speculation to the inhabitants of a world as much under obligation to the sun's rays as our own; and at a time too, when we have the most conclusive evidence that a trifling dimunition in the solar heat would effect a decisive alteration in the vegetation and productions of our latitudes.

The Wheat Crop.

It is not possible to tell yet what amount of wheat has been raised in Maine, but from what we learn it is much more than was ever harvested in one year among us. In our own immediate vicinity, some fields have been much injured by the grain worm, while other fields adjoining have been very little troubled. In other parts of the state, the insect is not known. We do not think that, taking the state together, the crop has been injured one quarter part, and we verily believe that what is left will abundantly supply our citizens with bread, and perhaps give a little to spare to other states.—*Maine Farmer.*

A letter from Liverpool, dated on the 16th September says that "the harvest all over the United Kingdom has been generally good, and is now chiefly secured."

COMMUNICATIONS.

On the Cultivation of Corn.

Mr. Tucker—There has been much said of late respecting new kinds of corn, as well as new modes of cultivation; and as facts, or the results of experiments, on such subjects are always useful, we claim the indulgence of the writer, and take the liberty of sending you the following letter for publication, believing that as it contains the results of experiments made with different kinds of corn, and by a differefft system of cultivation from that usually practiced, it may serve as a guide to other cultivators, or prompt them to make similar or varied experiments. R. & B.

Rochester Seed Store.

—

Messrs. Reynolds & Bateham—Observing your notice in the Genesee Farmer respecting seed corn, I herewith send you a specimen of three kinds raised by me the past season, and should you or your friends want a few bushels for seed, I shall probably have some to spare. The kinds are called the Red Blaze, White Flint and Dutton. The seed was all planted at the same time, and in the same field. It was planted with a drill-barrow in *triple rows*, having a space between every three rows of sufficient width for the "cultivator."

As it respects the time of ripening, the Red Blaze was first; the White Flint about ten days later, and the Dutton about five days later still.

In harvesting, we measured one square rod of the Red Blaze patch, which yielded one bushel of shell corn. The same space of the White Flint, yielded two bushels and one peck of ears, which is something more than one bushel of shell corn. The Dutton we did not measure, but think the product fully equal to the White Flint.

Respectfully yours, Silas Gaylord.

Skaneateles, 6th Oct., 1837.

Value of an Orchard.

I had the pleasure of calling a few days ago on an old and esteemed friend, and a successful farmer, one who does not follow things because they are new, but who first proves, and then adheres to them if they are good. He invited me to visit his orchard, one which I have known as excellent fruit bearing, for more than twenty years. It contains about four acres. From it he had gathered an abundant supply of superior apples for winter's use, had put into his cellar some two hundred bushels for feeding his pigs through the winter: had gathered enough of the best cider apples to make a few barrels for boiling into molasses, making sauce, and a supply for vinegar; and the ground was still covered in every direction with the ripe and golden fruit; while but a small part apparently, had fallen from the trees. But what interested me most, was a fine drove of fatting hogs, some fifteen or twenty I should think, large, thick, heavy and apparently nearly fit for slaughtering; and yet my friend assured me that his swine had had nothing but clover and apples, and a full supply of the latter but a few days: he not allowing them to go into the orchard, until a supply for other purposes was secured. He was convinced by repeated experiment, he said, that swine would fat as well and as fast on apples as on any food whatever; but he had made it a rule to feed them for a week or two before killing with corn, as it was the general opinion, it gave greater solidity to the pork. He also stated his belief, drawn from experiment, that good fresh apples during the winter, were as valuable for feeding pigs pound for pound, as *raw* potatoes. Where potatoes could be boiled or steamed, he thought it probable the potatoes would be the best. That my friend was not right on this point, I should not dare to affirm; his experience in agriculture being more extensive than my own; but though I was well acquainted with the fact that apples were excellent for wintering pigs, I had never rated them quite as high as did my friend, nor perhaps is it necessary, in order to establish their great value as a winter food for pigs. In short I was convinced there were no four acres on my friend's productive farm, that would yield him near the nett profit he would derive from his orchard; and that the cultivation of good orchards to a proper extent was a piece of sound policy with every one who would derive profit from farming.

M. D.

Effects of Cooking Food.

Mr. Tucker—In a late number of the Farmer you gave some account of the advantages of cooked food for animals, and the manner in which these advantages were gained, according the experiments of Raspail, Dutrochet, and others. From these experiments it appears in substance that the value of food depends mainly on the quantity of farinaceous matter it contains—that the farinaceous particles are small globules larger or smaller according to the plant which produces them—that these globules are filled with a glutinous fluid named dextrien by these philosophers and which constitutes the true nutriment of the plant or substance—and that in order to render this nutriment available, these globules must be broken, an operation imperfectly performed by grinding, but perfectly by the operation of heat in the expansion of these globules.

This theory, plausible in itself, and rendered probable by the well known philosophical accuracy and acumen of the experimenters, in my opinion derives no inconsiderable support from one or two simple facts which have probably fallen under the observation of most of the readers of your paper. I allude to the evident conversion of the interior of some farinaceous substances into a fluid during the process of dry cooking, and their consequent explosion by the bursting of their envelope. Some kinds of corn when parched are a curious illustration of this fact. On the application of gradual heat, the interior of the kernel expands, the covering or skin is drawn tight, as the heat increases the farinaceous globules break and the interior is filled with a melted fluid substance, which continues to expand until the envelope bursts, and the fluid matter forced out, instantaneously cools by exposure to the air, and forms the irregular white protuberances peculiar to parched corn. Some kinds of potatoes, too, are so purely farinaceous, or in common phrase mealy, that when thoroughly ripened and baked in a stove at a proper temperature, the same kind of changes take place that occur in corn, expansion, fluidity, and bursting of the envelope, though owing to the inferior tenacity of the covering, the melting and consequent expansion cannot be as perfectly observed in the potatoe, as in corn. I have lately several times observed this phenomena in a variety of early potatoes, of very superior quality for cooking, ripening early, as purely farinaceous as any variety with which I am acquainted not excepting the favorite pinkeye, the interior of a slightly yellowish shade, and of good flavor. I have several times known this potatoe during the process of baking explode with a considerable report, and such violence as to scatter the whole of the interior over the oven showing that the state of fluid expansion had partially commenced, but owing to the brittle nature of the envelope could not be completed. A. B.

From the Maine Farmer.

Insects in Wheat.

An Extract from a letter to E. Wood, Esq. *of Winthrop.*

Elijah Wood, Esq.—*Dear Sir:*—I received your letter of the 12th of August, some two or three days since, and hasten to reply. It seems from your letter that the grain worm has been doing serious injury in your part of the country, and you appear exceedingly anxious to learn all the facts you can, for your own benefit, and also the public benefit. I am glad to find you so wide awake on this subject, for I verily believe the greatest obstacles which impede our success in the cultivation of grain, originate from the depredations of insects.

I have to regret that my attention has been so much diverted by other cares and duties from this subject, so that my observations have not been made with that accuracy I could wish. I find however, that some of my neighbors have paid some attention to this subject, and have kindly answered my enquiries. I will briefly state the result.

1st. The extent of the injury done this year, compared with the last.

The most of people with whom I converse, set it much lower than last year. On low lands and intervales the damage is much the greatest.

2d. There appears to be more than one species of them producing the injury to the grain. I say *grain* for spring rye has suffered more perhaps than wheat. I had a piece of late sown winter rye in the same field with a piece of wheat—side by side. I first noticed some small black flies on the rye heads; the full grown ones somewhat larger than the species in common language emphatically termed "*Black flies*," so well known in newly settled places by their excessive biting. But their business appeared to be entirely with the grain, as they were apparently forcing their heads down among the husks enclosing the kernel. I noticed the same appearances in a neighbor's field in detached rye heads among his wheat; and he has since given me a very minute account of their operations. He states, that when the rye heads first started up above the wheat and began to blossom, the flies would crawl up on them and appeared to be digging into them; and he observed that where he saw these in plenty at night, in a very short time the new forming kernels entirely disappeared, and that there was not a single kernel of rye to be found in these detached heads. At this time no flies were seen on the wheat. Soon after, the bearded wheat, where there happened to be detached stalks in the field, (being a little earlier than the bald wheat, started up above it, and arrived at the same state of maturity, the flies attacked that: and lastly the bald wheat. My neighbor is confident, from his observation, that these flies injured the grain by sucking the juices, as well as depositing their eggs and producing worms. The same neighbor has considerable winter rye, but noticed no damage on that, either by flies or worms; but he has one piece of spring rye almost entirely ruined by them. He says he has seen but very few of the long slim flies described in the papers. Another neighbor has stated to me some facts as to the color and size of the flies he saw on his grain; so it seems, that in this neighborhood at least, the greatest injury has been inflicted by this species of fly.

I conversed, a day or two since, with a gentleman living in Dixfield Village, who informed me that the flies most plenty on the wheat in that vicinity, were the slim orange colored flies. And I have made enquires of some other people in different parts of the country, who generally agree in regard to shape, in describing the flies they have noticed, but not in color. I have, myself, seen but one of the orange colored flies this year, and that was when I was washing my wheat to sow. This was on the grass where I had been skimming off the blighted wheat. Two or three days ago, about sunset, after a very warm day, I seated myself at the edge of a late sown piece of wheat, for observation. I saw perhaps a dozen species of flies, of almost all shapes and sizes, apparently busy among the grain,

both on the stalks and heads. One of them resembled the orange colored flies in shape; but was yellowish white in color. Those flies were all exceedingly nimble in their movements when disturbed, and were as active on the wing as gazelles are on the foot. At the same time I saw myriads of similar looking flies basking in the sunbeams in various directions.

3d. Last year I sowed a piece of wheat on a field 70 or 80 rods from any other cleared field, and where no manure had ever been carried, and where no other grain had ever been cultivated except oats, and a very small piece of wheat some three or four years before. This was injured by them the worst of any I ever had. I did not get the amount of seed sown. Though we may well suppose some of these might be carried in the seed wheat, yet why should they be thicker there than about the barn, &c. where they might be carried in the manure, and in various other ways.

I believe, Sir, it would be nothing but vanity or obstinacy in any one, to speak with much confidence as to any remedy for preventihg their attacks. Lime and ashes have been tried in this neighborhood without success: and as to smoking our wheat fields with brimstone, I have little faith in the process. All these different kinds of flies seem to agree in one thing: they take shelter among the weeds and grass at the bottom of the grain. Here I think we must attack them to succeed; and I think it would be difficult to get smoke to settle low enough to dislodge them. I hope, however, you will pardon me for theorizing a little. If we could by trying experiments on a small scale, find any liquid substance, (not too costly) that would dislodge them, we might, I think, then find some way to spread it over our fields. I have thought of two:—First, by Engines—English agriculturists use engines for similar purposes. Second, by spouts—such as are used in some places to water meadows, &c. These being fixed in proper places in the spring when the wheat was sown, might serve for the triple purpose of conveying liquid manure over the land—supplying the grain with moisture in time of drouth, and of conveying some liquid substance to dislodge the flies, and of course prevent the worms. This plan, too, anticipates another advantage. You might then plough the most barren field and fearlessly sow it with wheat,and manure it just as you pleased, or as experience should determine to be most advantageous.

I am, very respectfully, yours,
JOSEPH H. JENNE.

Peru, Sept. 9th, 1837.

Hints upon Grain Growing.

In conversation the other day with an old and experienced farmer, we obtained the following observations which we think worthy the attention of farmers who wish to cultivate the several grains.

Prevention of the Grain Worm.—It has been found, during the past summer, that wheat which grew upon high and airy land, suffered very little from the ravages of the grain worm, while those fields which were situated in low lands, or in sheltered places were very much injured. From these facts it seems fair to draw the following conclusions:—That all such places as are exposed to the winds should be put to wheat, and as there seems to be a particular period during which the fly operates, perhaps it would be well to sow your spring wheat somewhat later than common,—sow about nine pecks to the acre. Some think that the bald or beardless wheat is the best. There is a species coming into use in the upper counties of the state, called Miramichi wheat. We understand it has been cultivated largely by Mr. Ariel Tinkham of Anson, who recommends it as being more productive than the old varieties usually cultivated among us.

Low dry lands to Barley.—As the grain worm prefers low and sheltered spots, but does not injure Barley, it is recommended to put those lands which are in such situations, and are warm and dry, to the Barley crop. Barley in this state should be sowed neither too early nor too late. It should not be sowed so early, that after it has come up, it will be checked in its growth by cold weather, but it should be put in at that season of the year, when there is a probability, that after it has come up, it will continue to grow in regular advance, and not be chilled and turned yellow by cold nights and late spring frosts. Sow about three bushels to the acre.

Poor Spire grass land to Oats and Peas.—Those who have land "run out," or become so poor as to bear but a thin quantity of spire grass, should break it up and sow it to peas and oats. Put in two and a half bushels to the acre—one half peas.

Peas for Hogs.—Where a farmer has a convenient chance, it is a good plan to sow successive crops of peas for his swine to eat off while growing. They can be fattened, or put in good plight, faster and easier in this way than by any other means. Put in one and a half bushels of peas to an acre, mixing each bushel with about two quarts of oats to hold them up. Turn the hogs in, while the peas are in the milk or beginning to harden, and let them eat them off; and thus move them from field to field. They eat vines and all, and the land is thus well fitted for a wheat crop the next year.

Should use the Plough and Cultivator more.—Experience proves that we do not use the plough and cultivator enough—or in other words, do not stir the ground so much as we ought. Ploughing sward land in the fall, and running the cultivator faithfully through it in the spring, has been found to give a decided improvement and increase of crops, by those who have tried it. Instead of a cultivator, a light plough will do, taking care not to heave up the turf or sod.

Importation of Grain.—It is stated that more than *seven millions* dollars have been paid by our country to European nations, during the last year, for wheat and other bread stuffs. Not a very flattering statement. This importation of bread stuffs from the old countries into one that is comparatively new, and capable of growing bread stuffs enough to supply almost the whole world, is not much to our honor, and has hurt our credit abroad exceedingly. The Silk Culturist, in remarking on this subject, very truly observes, that "the farmer who is dependent upon his neighbor for the ordinary agricultural products of the climate in which he lives, is not considered entitled to very large or very long credits, and it is precisely so with a country who are dependent on other nations for the staff of life. Not long since the Rothchilds were invited to make sundry investments in the United States, but declined; offering as a reason that *they did not think much of a country that did not raise its bread.*" This view of the case at once puts the thing in its proper light. The farmer who owns an equally good farm with his neighbor—warmed by the same sun, and moistened by the same dews—fertilized by the same showers—cherished and protected by the same laws, and yet neglects to cultivate it, and depends upon his neighbor for wherewithal to eat, would be considered as a shiftless character. So with a state, which having the means of supplying itself with bread given it by a bountiful Deity, but neglects to do it, will be looked upon, by even those who are glad to supply them, as not a little below par. We hope this reproach is passing away from us. The spirit of improvement is now abroad, and if properly stimulated, it will elevate us to a height where we ought to have been long since. It depends upon the farmers to do this. It is their business to do it—it is their duty to do it.

You cannot expect the mechanic to leave his shop and his trade and employ his whole time in raising the fruits of the earth. You cannot expect the professional man to leave his office and devote the live long year to agricultural pursuits. They may do it as an occasional relaxation—as a change from the monotony of their trade or profession; but their chief dependence is upon the farmers, whose trade, whose occupation and whose duty it is to raise enough for a supply. It is a high and responsible duty, an honorable and noble calling,—and where pursued with feelings in accordance with such views, uniformly yields a profit, and sheds a lustre upon the community which no splendor of any other kind can eclipse.—*Maine Farmer.*

Every nation has its traits. The Spaniard sleeps on every affair of importance; the Italian fiddles upon every thing; the French promises every thing; the British islanders eat upon every thing; and the Americans talk upon every thing.

From the New England Farmer.

Fall Ploughing.

It is commonly best for cultivators to plough most of their land, which they propose to plant the next season, in autumn. The advantages of fall ploughing are, 1st. It saves time and labor in the following spring, when farmers are generally pressed by the indispensable avocations of the season, and their cattle are comparatively faint. 2d. Land which is ploughed in autumn will be more exposed to the action of the frost, than that which is suffered to remain unploughed, and frost will pulverize soil more effectually than it can be accomplished by artificial means. 3d. Ploughing lands late in the fall, is of service by exposing insects and their eggs and larvæ to be destroyed by frost. If, however, the land is light and sandy, it is best not to plough it till spring, as it will become less porous and more retentive of moisture if permitted to remain without being stirred previous to the setting in of winter.

Much has been said on the depth of ploughing. We believe, however, that no general rules, not liable to very many exceptions, can be given on this subject. The depth of ploughing should be regulated by the staple of the soil, the nature of the intended crop, &c. Where the soil is deep, and it is proposed to raise beets, carrots, parsnips, lucern, or other plants with tap-roots, deep ploughing is necessary. But if the soil is thin, it will be expedient to commence its culture with shoal ploughing. If the plough turns up too much at a time of the barren soil immediately beneath the upper stratum, the succeeding crop will be of little value. The owner of such soil should endeavor to render it deeper by degrees, according to the manure he may be able to apply to it. A shallow soil is not only deficient in consequence of its furnishing but little pasture for the roots of plants, but it is liable to be so much scorched by drouth as to be incapable of producing any profitable vegetation. If, then, your soil is thin, plough it with a shoal furrow, and sow it with rye. The next season, plough a little deeper, add manure, &c.

Land should generally be broken up from the sward with a deeper furrow than will be required in subsequent culture. Harrowing and shallow ploughing will then answer through a course of crops. If the soil is light and porous, the furrow should be turned over as flat as possible. If it be a stiff loam, or mixed with clay, it may be well to lap the furrow slices a little one upon the other, so as to permit the air and frost to pervade the hollows or interstices between and under the furrow slices.

Although there are sundry advantages, as above stated, in fall ploughing, still in some cases, it is best to wait till spring. Elias Phinney, Esq., of Lexington, Ms., an excellent practical as well as scientific farmer, gives the following directions on this subject:

If it be intended to sow or plant sward land in the spring, the ploughing s ould be at as short an interval before putting in the seed, as possible. The greater the growth of the roots and tops of grasses at the time of ploughing, the more perfect will be the fermentation, and the sward by its increased toughness, will be less broken by the plough and harrow. The roller, loaded as heavily as may be conveniently drawn by one yoke of exen, should follow the plough as soon as may be convenient; this will smooth any unevenness of surface. Set the furrow slices close together, and thereby prevent their being torn up by the harrow, and also prevant the escape of the gases that are thrown out by fermentation. Every farmer who has three acres of ground to till, should have a roller. One made in two parts, is much preferable to that made in the usual way. After rolling, harrow with a light harrow—the more the better, provided the sod be not disturbed. The compost should then be spread on, and the ground again harrowed, when it will be ready to receive the seed, either corn or potatoes, or the small grains, with or without grass seed, or grass alone."

"The oppressor," said Lord Brougham in a speech, "always errs. Those who begin with hurting, such is the perversity of human nature, always end with hating."

Winter Cattle Feed.

The indifference which is manifested in every direction of our country towards procuring a supply of succulent food for milch cows during winter, is as cruel as it is impolitic. Without such food to be substituted for the herbage of pastures, it is as impossible that cows can be kept in good order as that they can be kept profitably to their milk upon dry food. Say what we may, the cow that keeps well to the pail during winter must be supplied with *such* food as yields succulent matter bountifully;—for without she be so provided, it is utterly impossible that the milk-vessels can *secrete* milk, and for the very obvious reason that they must have something to extract it from. We have often seen a farmer who, with half a dozen cows to the pail, in winter, did not make more butter and cream than supplied his own table, whereas he ought to have been able, in addition to domestic consumption, to have sent at least 20 lbs. per week to market. If this were an isolated case it would not strike us with wonder; but from its almost universal prevalence, it is at once a subject of regret and mortification—regret that the claims of self-interest and humanity are so shamefully neglected—and mortification, that so little regard is paid to a branch of husbandry so intimately connected with human comfort.

With these introductory remarks let us say what are, in our opinion, the best feed for cattle in winter. It is *Mangel Wurtzel*, *Sugar bee'*, *Ruta baga*, and *Pumpkins*. Each of these may, by proper care, be provided in ample quantities, without materially interfering with the other farming operations. A single acre planted in *Mangel Wurtzel*, or *Sugar beets*, in rows 2 feet apart, the plants 1 foot asunder, supposing that the beets average 3 lbs. a piece, which is a very moderate average, is capable of yielding 1089 bushels, which at the rate of a bushel a day to *each* cow, would last 7 cows from the 1st of December till the first of May, and if they get but half a bushel a day each, the product of an acre would keep 14 cows in food during the time named. Beets every one know how to cultivate—to wit. that they are to be planted in good deeply ploughed rich loam, previously well manured; that when the beets come up that they be thinned, cleaned of weeds, and subsequently receive three hoeings and cleanings. This is not more trouble than ought to be devoted to either the culture of corn or potatoes; but how different is the result of product. Of all the articles named by us as proper for winter food, we would prefer the two varieties of beets; but we think that every judicious farmer will at once see the propriety of providing some of all, as there is nothing which so tends to keep cattle, in winter, to their appetites, as frequent changes of food; we have frequently seen them reject the same kind of food one day that they had eaten with avidity the previous one, and after an interval of a few days feeding on something else, return with renewed vigor of appetite to that which only a few days before they had loathed.

The following table which we have prepared with care, will shew the yield of an acre of beets planted in rows two feet apart, and at the distance of one foot in the rows, being 21,780 plants to the acre, at the several averages of 3 lbs. 4 lbs. 5 lbs. 6 lbs. and 7 lbs. as the supposed weight of the beets, which averages we think low, as the highest is not one-third the weight of beets raised by Mr. Pugh of Ohio, the present season. It will also show the number of cows that an acre of ground will sustain for five months during winter, say from the 1st of December till the 1st of May, at which latter period, the grass will have been so far advanced as to afford a substitute for root-feeding:

Average weight of Beets.	Product of an acre in pounds	Product in bushels	No. of Cows which may be fed at a bush. a day, 5 mont.
3 lbs.	65,340	1,089	7
4 "	87,120	1,452	9
5 "	108,900	1,815	12
6 "	130 680	2,178	14
7 "	152,460	2,541	16

Now we would respectfully ask if these *averages* are not *low enough*, and if they be so, and we think they are, we would ask, if an acre of ground could be put in any thing else that would yield so much solid and nutritious food as either Mangel Wurtzel or Sugar Beet? We unhesitatingly say so, and defy contradiction. And it is greatly in favor of these two varieties of beets, that horses as well as cattle feed upon them not only with avidity, but with decided advantage to health and condition. Why then should farmers hesitate with respect to the propriety of their culture. Let them, if they choose not to go largely into their growth: begin on a small scale, say half an acre or a whole one, and we will risk the assertion, that they will never omit to raise them again, provided they do these roots justice in their culture; for there is no food which can be given to a cow that contributes so much towards increasing the quantity and quality of both milk and butter.—*Farmer & Gardener.*

Provender and Mathematics.

There is nothing in this world like calculation. The Southron may *reckon*, and the Yankee may *guess*, but after all, if they would know how they are going, and where they are going, and what they are about, they must make a fair *calculation*.

In proportion as they calculate right, or exact, so will they be enabled to get along well or ill. The common rules of arithmetic will generally give the true results if properly applied, that is, if they have the right data to start upon. But what we were about to say more particularly is this—There is a rule in our Arithmetics not much used, and yet one which may be often used to great advantage. It is called "Allegation," and the object of it is to give a few rules whereby different substances of different prices and qualities may be combined together in such way and manner as required to bring about a certain required result. It occurred to us the other day that farmers might use it to very good advantage. We met with an individual, with the money in his pocket, in pursuit of some Peas and Oats to fatten his hog. Why do you not purchase corn? It is too dear. Why do you not give him Oat-meal? I have plenty of Oats, said he, but they have not "heart" enough in them to fatten hogs. I should be willing to give 67 cents per bushel for peas and oats, if I could find them "*handy*." Well, if you can't find them "*handy*," buy some corn and mix it with your oats until you get a mixture worth 67 cents per bushel. How much corn, said we to him, at one dollar per bushel, must you buy to mix with your oats at 34 cents, to make the mixture worth 67 cents per bushel? Fact, said he, looking very grave, I used to do such *sums* at school, but I havn't thought of them since. Probably you used to do it thus,

$$67 \begin{cases} 34 \text{——} & 33 \text{ Oats,} \\ 100 \text{——} & 33 \text{ Corn,} \end{cases}$$ taking 34 from 67 leaves

you 33, which you put next the corn, and 67 from 100 leaves 33, which you put next the oats. Thus you see at the prices which you have put down, you must buy thirty-three bushels of each; or if your oats are worth 40 cents, and corn 120, it will be,

thus— $$67 \begin{cases} 40 \text{——} & 53 \text{ Oats,} \\ 120 \text{——} & 27 \text{ Corn.} \end{cases}$$

Very true, said he, but that will make more provender than I want. All you have to do then is to vary your mode of calculation. If you have but ten busne s of oats to spare, and they are worth 40 cents, how much corn must you mix with them to make the mixture worth 67 cents?

$$67 \begin{cases} 40 \text{——} & 53 \text{ Oats,} \\ 120 \text{——} & 27 \text{ Corn.} \end{cases}$$ Then say, as 53 is to 10, so is 27 to the required number—

$53 : 10 :: 27 : 5\frac{5}{53}$

$$53)270(5\tfrac{5}{53} \quad \begin{array}{r} 10 \\ \hline 265 \\ \hline 5 \end{array}$$

ans. five bushels and a little more than one-tenth of another bushel. The querist bought the corn—mixed it with his oats—and is now fattening his pig with what he calls his *mathematical* provender; and we hope he will send us a piece of his pork by way of fee for *cyphering* for him. The proportion of corn to the oats is the same as the general proportion of peas to oats; though the corn may not be quite so nutritive as the peas. We are inclined to believe the mixture better than all corn.—*Maine Farmer.*

Agricultural Implements

Exhibited at the late Fair of the Mechanic Association at Boston.

There is no better index of the State of Agriculture in a country, than is presented by the view of the Implements in use among Cultivators, for facilitating and giving the most beneficial effect to the labors of the Husbandman. A farmer with poor tools, not only wastes a great part of his strength, but what he performs is not well done, and his crops by their scantiness and poor quality, will indicate deficieney of culture. One man with good implements, in prime order, will perform nearly or quite as much work as two men will bring to pass with poor tools. What Lord Bacon predicted of *knowledge*, when he uttered the famous axiom "Knowledge is Power," may be said of good Agricultural Implements. They double the *power* of the Farmer.

Impressed with these sentiments, we are glad to see our far-famed Mechanic's Fair enriched with Agricultural Implements, which would have received the encomiums of Washington, Young, or Sinclair. We will mention such as our limits will allow in the present number.

Joseph Breck & Co., from the New England Agricultural Warehouse, Boston, exhibited the following Articles, viz:—

Willis's Improved Seed Sower.—This machine has been fully tested for the last two years, and proves to be a great acquisition to the farming interest. It will sow all kinds of garden seeds, from the turnep to the mangel wurtzel, in the most perfect manner; and will save at least one-third of the seed commonly used, and the work is done with one half the labor. Willis's Improved Seed Sowers have been highly recommended by those who have used them.

Willis's Improved Cultivator.—The improvement on this machine consists in shaping the teeth, so that the mortices are cut directly with the grain of the wood, and not partly across the grain, as they were formerly made. By this means they are much stronger, and not so liable to break. Another very essential improvement is the manner of bracing the handles. There has been a very great objection to the Cultivator, in consequence of not having any way to brace the handles, and at the same time admit of the expanding and contracting of the implement. This objection is obviated by the improvement; which consists in securing a brace on each side of the handle, then passing a bolt from the lower part of the brace, through the expanding part of the machine. The different holes in this part of the Cultivator are set off so exactly, that the bolts will pass through from the brace at any given distance required, and be secured by a thumb-nut, so that it can be altered in a very short time, from one width to another, without much trouble, and the handles are as secure as those of a common plough.

Green's Straw and Hay Cutter, is considered one of the most perfectly operating machines that has ever been introduced. It cuts the hay or straw with the greatest ease, and at a very rapid rate. It is said to cut from 2 to 3 bushels of hay or straw per minute, operated on by one person. This machine is worthy of the patronage of all farmers and other persons using fodder for horses or cattle, as cut feed is considered by good judges, as saving at least one quarter part of all the expense of feeding.

Willis's Improved Hay and Straw Cutter, a very strong and substantial machine, with the advantage of its being easily adjusted so as to cut at any given length.

Hale's Threshing Machine, is considered one of the best operating machines for the purpose for which it was introduced. It is said to do its work in the most thorough manner, and at a very rapid rate. Every farmer that raises grain should have a threshing machine.

There were a number of Winnowing Machines exhibited, the most substantial and best operating of which was one of Holmes. This article appeared to be of good workmanship, and is said to do the work well, and with great expedition.

Corn Shellers.—Two of these were exhibited. The Harrison machine is much the best, doing the work well and at a very rapid rate. It is said to shell 75 bushels per day, in the most perfect manner. The other machine operates well.

Willis's Improved Sugar Mill.—A very useful machine for grinding the Havana sugar. Said to grind a box of 400 lbs. of sugar in 40 minutes in the best possible manner, leaving the grain of the sugar entire, and very light, and improving very much the shade of the sugar. It appears to be a great improvement over the old fashioned manner of using the shovel in breaking up the hard lumps of the Havana sugar.

Ploughs.—Of these, there were a number introduced, all of very good construction. The most perfectly manufactured one was Howard's, which is understood to stand the highest in the estimation of farmers, generally, and has received a premium of ten dollars at the Brighton Cattle Show, from the Massachusetts Society for Promoting Agriculture, for being the best plough exhibited on the field.

Cheese Presses.—Of these, two were exhibited. The Quaker self-adjusting Press, appeared to be a very perfect article. The advantage of this press is, that the weight of the cheese presses itself; therefore, no other weight or levers are necessary. It can be made to press one or more cheeses at the same time, a property very useful to cheese makers.

There were a number more very useful farming tools, introduced from the above mentioned establishment of Breck and Co. Among these were

Willis's Improved Cast Steel Manure Forks, worked out from a solid piece of cast steel, a good article.

Gault's Patent Churn, said to be the best in use.

Davis's Road Scraper, quite an improvement on the old dirt scraper.

Farnham's Grater Cider Mill.—A very useful invention, said to grind 60 bushels of apples per hour, in the best possible manner. The cider from this kind of mill is considered to be far better than when it is made in the old fashioned mill. It has no sediment, and more cider is obtained from the same quantity of apples.

Cast Iron Cider Screws.—By these screws, the farmer can press out a much larger quantity of cider from the same quantity of pomace, having double the power with the iron screw, that he would with the old fashioned wooden screws.

Revolving Horse Rake.—This is a great improvement in raking hay. It is said that one man and a horse will, by using this machine, perform as much work as six or eight men in the common way.

There is no stopping to unload the rake: for, as fast as the rake is loaded, it revolves, unloads itself, and takes the other set of teeth, and thus continues till the work is completed.

The following remark, on the agency of Mr. Willis in inventing and bringing before the public many valuable implements, is from the able Editor of the Boston Courier, and are as well said as well merited:

"For most of the improvements, which have been made in these articles, the farmers are indebted to Mr. Charles Willis, one of the concern of J. Breck & Co., a gentleman, whose intelligence and ingenuity are constantly employed in devising and executing something advantageous to the agricultural community, and for which he merits the favor and gratitude of the public in general."

Flora Cestrica.

This is the title of a closely printed volume of near 700 pages, which we have lately received, containing an enumeration and description of the flowering and filicoid plants of Westchester county, Pennsylvania, with notices of their properties and uses in medicine, domestic economy and the arts; by Dr. William Darlington. This is a work which deserves very high praise, as well on account of its valuable uses and its accuracy, as the great labor which its preparation involved. The author of the work is a gentleman who has devoted a large portion of his life to the beautiful science of Botany, in the pursuit of which he has always been an enthusiast; but some degree of enthusiasm is essential to excellence in the sciences as well as the arts. This work is the result of the labor and explorations of many years, and reflects the highest credit upon the industry and perseverance of the amiable and intelligent author. His county and state ought to feel proud of such a citizen as Dr. Darlington, who thus spends his time and his means in recording and describing its various vegetable productions, consisting of nearly three thousand genera or species. The work has been published at the expense of the author, a large part of which he cannot expect to be reimbursed for many years, but which did not enter into the consideration that induced him to undertake it. His motive could only have been the advancement of science and the reputation of his county. The Flora Cestrica is not, however, confined to the limited territory of Chester, but extends to the whole country, as many of the plants the author describes are to be found in various portions of the United States, and of course its utility is general. To the young botanist it will be found very useful from the full but condensed descriptions it furnishes of the plants he may be seeking to discover. Three or four other works of this kind have been prepared and published in this country. Such as Bigelow's Florula Bostoniensis, Elliott's Botany of South Carolina and Georgia, &c., which are very useful, and the work of Dr. Darlington is not less meritorious and valuable. Indeed, in most cases, his observations are, we think, more full and satisfactory. We give a few specimens:

Zea, (Greek *zao*, to live; the seeds contributing eminently to the support of life.) *Zea Mays*, Indian corn—maize. *Obs.* There are several varieties of this plant, with the seeds yellow, white, or sometimes dark purple; and one which is much smaller, and comes sooner to maturity. I have also seen a singular variety, in which every seed on the receptacle appeared to have its own husk, or spathe-like covering, in addition to the general envelope. The Indian corn is one of the most interesting of the Graminæ; rivaling the sugar cane and the rice in intrinsic value, and, in this region at least, ranking next in importance to wheat itself. It is universally cultivated here, being generally the first in the routine of crops, on breaking up the lay, or sod. The seed is planted early in May. No other species of the genus is known in the United States. Convolvulus Batastas, Vulgo, sweet potato—Carolina potato. *Obs.* This exotic species is frequently cultivated here for its fine esculent tubers. But those produced in the sandy soil of New-Jersey are considered so much superior in quality, that our chief supply is derived from thence. The plant is propagated by cuttings of the tubers, which are planted in the beginning of May. It never produces flowers with us. Lindley says this is the potato of Shakspeare, and contemporary writers, the Solanum tuberosum, or Irish potato, (now so common,) being then scarcely known in Europe, Solanum Tuberosum, common or Irish potato. *Obs.* This truly valuable plant is cultivated by every owner or occupant of land. It is one of the indispensable crops for a family. Long culture has produced numerous varieties; the most esteemed of which, at this time, in this country, produces a large oblong white tuber, with the skin often tinged with purple. It is called the "Mercer Potato." The plant is usually propagated; not by means of the seed, but by cuttings of the tubers, which contain numerous buds called eyes. We are indebted to South America for this most important vegetable. My friend, the late Dr. Baldwin, collected native specimens of it near Montevideo, on the river La Plata, in the year 1818.

We need scarcely recommend this valuable work to the young botanist, as every botanist will doubtless rejoice at its appearance, and be grateful to its author for the contribution he has furnished to a science as useful as it is beautiful and interesting. —*National Intel.*

Morus Multicaulis.

THE subscriber can furnish large and small quantities of the genuine Chinese mulberry, or Morus multicaulis trees of the most thrifty growth and matured wood. The trees are from two to six feet in height, and will be sold at the lowest prices, in proportion to their size. They will be packed so as to insure safe transportation to any part of the United States. Orders for not less than one hundred will be delivered in New York or Philadelphia, or shipped from thence or from Hartford. October and November are the best months for transportating to the South and West.

SILK WORM'S EGGS, of three varieties, White or Two Crop, Sulphur, and Orange colored. Silk Reels, Brook's Silk Spinning Machines, White mulberry seed, &c. &c.

WM. G. COMSTOCK.

Hartford, September, 1837. sep 23–8w

Chinese Mulberry Trees. &c.

THE subscribers will supply, at reduced rates, the following trees:

200,000 Chinese Morus Multicaulis, of various sizes, at the lowest prices.

20,000 New Chinese Morus Expansa, a seedling variety from the Morus Multicaulis, with very large succulent leaves, remarkable for the quantity of nutritious matter. They are engrafted on the White Mulberry, and are hardy enough for the most northern climates, and possess all the advantages of the Morus Multicaulis. These are six feet and upward in height.

3,000 New Hybrid Morus Multicaulis with large leaves and close joints, and 6 to 7 feet in height and very hardy.

100,000 Florence Mulberry, with entire leaves, in which point they differ from the common White Mulberry. These, are imported direct from the best silk districts of France, and are 1 1-2 to 2 1-2 feet in height, and will be sold at very low rates.

50,000 Italian White Mulberry, at very low prices.

Also, 100 lbs. White Mulberry seed.

1000 lbs. yellow and white Sugar Beet seed.

20,000 Brussa Mulberry, 5 to 7 feet high, and 10,000 of less size.

25,000 Chinese Mulberry, so called.

Priced catalogues of Fruit and Ornamental Trees, Green House plants, Bulbous Flower Roots, splendid Dahlias and Garden, Agricultural and Flower seeds sent gratis to every applicant.

Orders sent us por mail will receive immediate attention, and forwarded as ordered. Linnæan Garden, Flushing.

WM. PRINCE & SON.

N. B. Companies or individuals desirous to contract for large numbers of Trees, will be dealt with on very liberal terms. sep23

Chinese Mulberry--Morus Multicaulis.

WARRANTED genuine, and the most approved varieties for feeding Silk Worms; among which are the Manilla and Canton Multicaulis, with roots of one, two and three years old.

Also, CUTTINGS, and the Canton Seed bearing tree.—Multicaulis, Asiatic, Chinese, Smyrna and Brussa SEEDLING TREES, may be had at the usual prices, and selected from the Agricultural and extensive Mulberry Nurseries in Northampton, Mass. and vicinity—securely packed and delivered at the Nursery, or forwarded to Boston, Hartford, New-Haven, New-York, Albany, Rochester, Buffalo, Cleveland, Charleston, Savannah, Mobile, St Louis, or any other place within the United States, conformable to order. Some of the above are considered as peculiarly adapted to sustain our hard winters.

Autumn being the best season for removing the trees, letters addressed to the subscriber, post paid, will be promptly attended to, with instructions for management.

D. STEBBINS, *Sec'y Ag. Soc'y.*

Northampton, Sept. 1, 1837.

N. B. Orders for the above (if made in season to beforwarded by the Canal,) will be received by GEORGE W HARWOOD, No. 20, Buffalo-street, Rochester.

sept 30-f3t m2t

Ram Sheep of the pure Kent Breed.

MR. RICHARD GOORD, of Twade near Sittingbourne, Kent, England, having devoted a long life in an endeavor to form a breed of Kent Sheep, (as Bakewell and Ellman have done with the Leicesters and Southdowns,) that should, with great size, combine all he desirable qualities, such as symmetry, hardihood of constitution, propensity to fatten, wool in quantity and of fine quality, &c., so far succeeded as for many years to carry off the prizes at the annual stock shows in Kent, when about two years ago, it being considered that he had, by bringing this breed to such perfection, conferred so great a benefit upon the community at large, a subscription was entered upon by the nobility, gentry, and others, and a most splendid vessel of embossed silver, (that I believe would contain from nine to ten gallons,) mounted on feet, with a handsome and most flattering inscription, was presented to him at a public dinner given for that purpose.

The carcass of this stock, at twenty months old, after being skinned and cleaned, commonly weighs from sixteen to eighteen stones, of 8lbs. to the stone, or 144lbs. When I left Sittingbourne last May, I selected a fine Ram, of the above breed, perhaps the largest sheep with such a combination of good qualities, that ever crossed the Atlantic, and have it now on my farm (lately belonging to Mr. Jacob Pound) at Pittsford, where those desirous are welcome to see him, and may if they please send a few ewes this season at one dollar per head.

S. W. SHOTTER.

Pittsford, Monroe County, N. Y.

Oct. 3, 1837. f3t*

Berkshire & Lincolnshire Pigs for sale.

I HAVE a considerable number of late Spring and Summer Berkshire Pigs, crossed with the Lincolnshire, for sale at Whitney's Distillery in the city of Rochester. The character of the Berkshire breed is somewhat known in this country. I believe the Lincolnshire is but very little, if any. I consider the above cross superior to any breed of hogs in America. I have a pig of the above breed that was four months old the 20th of this month. It was put in a pen alone seven weeks ago, it has been well attended to, the result is that the pig gained from 9 to 11 pounds per week.

P. S The Lincolnshire breed was imported by Gov. Maitland of Upper Canada.

AMOS SAWYER.

Rochester, Aug. 26, 1837. aug 26–f7t3t

Internal Improvement.

Genesee Canal—Allegany River—Coal, Iron, &c.

It is satisfactory to learn the particulars embodied in the annexed letter from a well-known Engineer. Those who look with interest towards the Allegany Hills for Coal and Iron, are particularly referred to the perusal of the statements of Mr. Mills, respecting the facts developed by his researches connected with the surveys for the Genesee Canal, &c.

Olean, Allegany co. Oct. 10, 1837.

Dear Sir—The inhabitants of this section have in view the construction of a Canal and Slack-Water Navigation from this place up the river to the Pennsylvania line, and from thence by a similar improvement on the part of the Pennsylvanians, to reach the Coal and Iron Ore Beds, lying on the head waters of Conondaga creek, (commonly called Potatoe creek,) in McKean county. Much has been said of the value of the coal, and of the importance of this improvement in connection with the Genesee Valley Canal. To obtain a more perfect knowledge of the facts, I have, in accordance with the wishes of those interested in the subject, made a survey for a canal as far as the Pennsylvania line; and I have also, accompanied by the Hon. John Griffin and C. T. Chamberlin of Cuba, and Fredk. S. Martin and David Day of Olean, made a personal examination of the route above the Pennsylvania line; and of the coal and iron ore beds in McKean county. In travelling over the line to the coal region, I was surprised to find so little fall in the streams, and the flats so well adapted to canalling. The United States Corps of Engineers, under the direction of Major Hughes, commenced their surveys for the improvement of the Alleghany river at the mouth of Potatoe creek, some twenty miles above Olean, and I am informed they found the descent between those two points but 22 feet 8 inches, a little over one foot to the mile.

From the mouth of the Potatoe creek to the coal district no instrumental examinations have been made—but as far up as we followed the valley of the creek (to Smith port) some six or seven miles from its junction with the Allegany, I think the average ascent of the stream would not exceed two feet to the mile.

The coal examined lies, in a direct line, about 28 miles south of Olean; but by the way of the road, following up the vallies of the Alleghany and Potatoe creek to Smith port, and thence by the turnpike over Bunker Hill, it is 38 miles.

Tho route of the proposed improvement would be more circuitous than the road, particularly from Smith port to the coal, as the line must necessarily be carried round the eastern base of Bunker's Hill. I should think, however, the increased distance would not exceed four miles, making the whole improvement about 42 miles in length.

Seven and three-fourth miles of this work will be in the State of New York. A canal inland is proposed for six and a quarter miles of the distance, which brings us to the Mill-Grove Mill-pond, near the mouth of the Oswego creek. This pond is formed by the construction of a dam across the Allegany about one mile and a half north of the Pennsylvania line, and sets the water back so as to make slack water to the mouth of Potatoe creek, some twenty miles above Olean.

I am informed the United States Engineers took soundings of the pond, and found no bars on which there was less than three feet depth of water. By a small expenditure in cleaning out the bed of the river, and the construction of a towing path on its margin, it is believed the pond will afford a good slack-water navigation for the distance of 13 or 14 miles.

The canal part will pass over lands favorable for its construction. It will connect the pond with the Genesee Valley Canal at Olean, and without a lift lock for the whole distance, form an uninterrupted boat navigation to Potatoe creek.

From thence to the coal bed a canal or rail road may be constructed. To determine which is best or most feasible, will require an instrumental examination.

The coal and iron ore beds examined lie on the south-easterly side of Bunker's Hill, near the source of a small stream called Mill brook, which empties into Potatoe creek six miles below. Veins of coal were first discovered by the inhabitants in small ravines that put down into the creek. Excavations have since been made at several points.

I saw the coal at five places, varying from one-fourth to one mile apart. It was difficult to determine with certainty whether at all the points the coal was of different veins or not—Though I am inclined to believe it was at most if not all of them. The veins vary in thickness from 10 to 17 inches of solid coal.

The most perfect opening I saw, exhibited 3 veins, alternating with slate, making together 8 feet in depth, from the top of the upper to the bottom of the lower vein: some four or five feet of which, I think will, when the drift is carried further into the hill, prove to be good coal. It is bituminous and of a fair quality. Bog Iron Ore of an excellent quality is found in large quantities in the same region: and also lime stone. The excavations were slightly made, and consequently did not afford a very good opportunity to ascertain the extent of the coal, but from what I saw I am induced to believe it will prove sufficiently abundant to work advantageously, and with the improvement in question, must eventually contribute largely to the trade and importance of the Genesee Valley Canal.

I am now engaged in preparing some 30 miles more of this canal for letting, which will be put under contract on the 14th of next month. The balance, to Mount Morris, and the side cut to Danesville, it is proposed to put under contract early in the spring. The probability is that there will be no farther delay on account of funds, and that the work will now be pushed forward, vigorously, until the whole is completed.

I am, very respectfully, yours, &c.

FREDK. C. MILLS.

Charles Perkins, Esq. Rochester, N. Y.

Pine Lands and Pine Lumber.

There is, perhaps, no subject in which the public are more deeply interested, or in proportion to that interest, on which it is less informed, than of the sources, quantity, and probable duration of the supply of white pine lumber. It is no uncommon occurrence to hear merchants and business men predict the rise or fall of the various articles of merchandise and produce in the range of their business, and we are aware that they predicate the opinions they advance upon the knowledge they have acquired as to the means and extent of the supply and the amount of the demand. But who is there who troubles himself to inquire how much pine timber there is in the United States? how long it will last? what is the cause of its regular and rapid advance in price? and will it continue to advance, or will it diminish in value in years to come? We have been led to these remarks by some facts communicated to us by a friend who has investigated the subject, and on whose statements we can rely.

It is known, we presume, to most persons, that white or *pumpkin pine* cannot be produced or grown, as the under brush or second growth of pine forests is always of a different species of wood. Thus we can see at a glance, that the county or State which is once stripped of its valuable timber, can never again see its soil clothed with the same. With this fact before us, together with the knowledge of the extent of the annual consumption of this article, it can be no very difficult matter to arrive at a pretty accurate conclusion as to the *time* which the forests of the United States will supply the demands of the country. A few facts will show that we are not so well furnished as is generally supposed.

In all the States and Territories connected with the Union, there are substantially, but three States which have a *surplus* of white pine to supply the enormous and increasing demand which is yearly made by the other States and Territories. These are, New York, Pennsylvania and Maine. The latter, (Maine,) with her *twenty-five hundred saw-mills*, can hardly supply the New England States, and it is left for Now York and Pennsylvania to furnish the *pine lumber* for the great valley of the Mississippi, after deducting what is needed for the consumption of four millions of enterprising inhabitants within their own borders. We speak of course in general terms and in round numbers, and do not mean to say that many of the States cannot supply their own wants to some extent for several years.

Allowing these statements to be true, we are now prepared for the question,

How long will the white pine forests in these States supply the demand?

It has been ascertained beyond a doubt, that there were floated on our canals, the Hudson, Mississippi Susquehanna, and Delaware rivers, during the last year, nearly *six hundred and fifty millions* of square feet of pine lumber! To supply this quantity, over sixty-five thousand acres of *good* pine lands have been stripped of every tree! If there are seven hundred thousand acres, even at this rate, without any increase, it will last only some ten or eleven years; and from facts that have been gathered on this subject, we venture to say that there is not white pine enough in the United States to supply the present consumption fifteen years! If any one can controvert this conclusion by facts, we should be glad to hear them. Ten years since, the pine lumber on the Alleghany and Susquehanna was from four to eight dollars a thousand feet; it is now from *ten to eighteen*, and large contracts for the latter price were made last month for lumber which is now on its way to Natchez and New Orleans, the markets for which it was purchased. When pine lumber is transported five thousand miles on the Mississippi and its tributaries, and pays large profits, can there be a supply nearer? With these hints we leave the subject for the present.—*Oneida (N. Y.) Whig.*

Cushaw and Valparaiso Squashes.

A LOT of these fine winter vegetables, from the garden of H. N. Langworthy, are for sale at the Rochester Seed Store. They will keep a long time, and persons who wish a family supply for the winter, will do well to call and select them soon.

To those who have not tested the qualities of these delicious vegetables, we would say that they are very rich and sweet; when prepared in the usual manner, they are superior to any other kind of squashes, and when cut in pieces and baked in a stove, they resemble very much in flavor the sweet potatoe, for which they are a very good substitute. They are also excellent for 'pumpkin pies.'

We have also, some *seven year*, or long-keeping pumpkins, for making pies next spring and summer. Also, some large *cheese pumpkins* which are very fine, sweet and solid.

REYNOLDS & BATEHAM.
oct 14-f Rochester Seed Store, Arcade Hall.

Fruit Trees For Sale.

THE subscriber respectfully informs his friends and the public that he has for sale at his Nursery in Rochester, Monroe county, state of New York, a large quantity of Fruit Trees, grafted and innoculated with the most approved kinds, now fit for transplanting, which he will sell on the most reasonable terms. SAMUEL MOULSON.
apr 15-tf

N. B. Cash will be paid for a few thousand two years old Apple Trees.

ELECTION NOTICE.—*Sheriff's Office, Monroe County, Rochester, August 8th*, 1837.—A General Election is to be held in the county of Monroe on the 6th, 7th and 8th days of November next, at which will be chosen the officers mentioned in the notice from the Secretary of State, of which a copy is annexed. ELIAS POND, Sheriff.

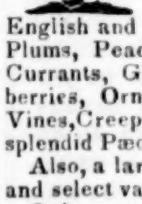
State of New-York, Secretary's Office, Albany, August 1st, 1837.—Sir; I hereby give you notice that at the next General Election in this State to be held on the 6th, 7th and 8th days of November next, a Senator is to be chosen in the Eighth Senate District in the place of Albert H. Tracy, whose term of service will expire on the last day of December next.

JOHN A. DIX,
Secretary of State.

To the Sheriff of the County of Monroe.

N. B. The Inspectors of Election in the several towns in your county will give notice of the election of Members of Assembly, and for filling any vacancies in County offices which may exist.
aug 8-arf

Monroe Horticultural Garden & Nurseries, Greece, Monroe co., N. Y.



THIS establishment now comprises over 20 acres, covered compactly with Trees and Plants in the different stages of their growth.

The subscriber offers to the public a choice selection of Fruit Trees, of French, German, English and American varieties, consisting of Apples, Pears, Plums, Peaches, Cherries, Apricots, Nectarines, Quinces, Currants, Gooseberries, Raspberries, Grape Vines, Strawberries, Ornamental Trees, Shrubs, Plants, Hardy Roses, Vines, Creepers, Herbaceous Perennial Plants, Bulbous Roots, splendid Pæonies, Double Dahlias, &c. &c.

Also, a large collection of Green House Plants, of choice and select varieties, in good condition.

Orders respectfully solicited. Trees and Plants, when ordered, are carefully selected and faithfully packed, and if desired delivered on the canal one mile from the Nursery, or at Rochester.

Orders for Mr. Rowe's Nursery received by the publisher of this paper.

Catalogues will be sent to every applicant gratis, or may be had by calling at the office of the Genesee Farmer.

April 1, 1837. ASA ROWE.